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UNIT SPECIFIC TECHNICAL MEMORANDUM: EXPLOSIVES STORAGE BUILDING PRATT & WHITNEY, EAST HARTFORD, CT

AREA: North Klondike

RCRA RECORDS CENTER
PRATT & WHITNEY
ID NO. CTD15074
FAC LOC. R-9
01HERRR DMS#1147

SUB-AREA: Explosives Storage Area

ENVIRONMENTAL UNIT: Explosives Storage Building

Location: North Klondike (Suntan) Area; fifth road south on north access road, from Perimeter Road (Drawing 1).

Description: The Explosives Storage Building was a 11 foot by 22 foot building which was surrounded by a 25 foot by 50 foot chain-link fence. The building was isolated from other structures to the west and south by an earthen berm for explosion hazard purposes.

Dates of Operation: Approximately 1957 to 1993.

Processes: Storage of hydrazine (H_2NNH_2) and pentaborane (B_5H_9), both are explosive liquids. Other compounds stored in this area may have included nitrogen pentoxide.

Aerial Photographs: Large-scale aerial photographs for 1965, 1970, and 1975 were obtained from Keystone Aerial Surveys, Inc. Three small aerial photographs, taken in 1969, 1975, and 1977, were also obtained from the Pratt & Whitney (P&W) Photographic Services Department.

The building is visible on the 1965, 1970 and 1975 aerial photographs obtained from Keystone Aerial Surveys, Inc. The area appears active and the building is intact. Operational details within the unit are not discernible, however, there are no visible indications of drains or sumps, or obvious signs of contamination.

The building is visible on the aerial photographs obtained from P&W Photographic Services. In all three aerial photographs, the building appears intact. Operational details within the area are not discernible on the photographs, however, there are no visible indications of drains or sumps, or obvious signs of contamination.

Specific Contaminants of Concern: Neither hydrazine (H_2NNH_2) or pentaborane (B_5H_9) are constituents of concern because of their volatility; however, petroleum or solvents may have also been stored in the building. In order to be as comprehensive as possible in the investigation that was conducted, the following constituent groups were analyzed for: volatile organic compounds (VOCs), and metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, nickel, and zinc), and total petroleum hydrocarbons (TPH).

Potential Release Mechanism: Impacts to soils and groundwater associated with potential spillage or leakage from storage of chemicals inside the building with potential subsequent migration to the subsurface.

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INVESTIGATION AND REMEDIATION ACTIVITIES:

Due to the potential for a release associated with chemicals stored in the building, a subsurface investigation to determine the degree and extent of soil contamination was performed in June, July, and October 1996. Prior to 1996, no investigation had reportedly been performed.

One supplemental groundwater investigation has also been conducted in the Explosive Storage Building Environmental Unit. Groundwater samples were collected from two borings (NK-SB-12 and NK-SB-13) using Geoprobe® screen-point groundwater sampling techniques. Barium and zinc were detected in both of these groundwater samples. For a more detailed account of these sampling events refer to the LEA Technical Memorandum (TM) 3, *Groundwater Sampling and Quality*.

June and July 1996 Investigation (LEA):

Description: On June 28, 1996, two soil borings, NK-SB-12 and NK-SB-13, were advanced in the vicinity of the Explosives Storage Building by Loureiro Engineering Associates, P.C. (LEA), as shown on Drawing 1. Soil samples were collected from each of the borings in continuous 2-foot intervals to 14 feet, with a one foot interval from 14 to 15 feet. The depth of 15 feet was selected to ensure that sufficient data were collected for comparisons against the direct exposure criteria in the Connecticut Remediation Standard Regulation (RSR). No soil sample was collected from boring NK-SB-13 from a depth of 14 to 15 feet due to insufficient recovery.

A total of 15 soil samples were submitted to the LEA Analytical Laboratory and screened for the presence of target VOCs, including benzene (BZ), ethylbenzene (EBZ), tetrachloroethylene (PCE), toluene (TL), 1,1,1-trichloroethane (TCA), trichloroethylene (TCE), and xylenes (XYL). Based on visual, olfactory, or instrument evidence, and with consideration of the potential release mechanism, two samples from each boring were submitted to Averill Environmental Laboratory, Inc. (AEL) and analyzed for the presence of VOCs, metals, and TPH. Semivolatile organic compounds (SVOCs) were not included because TPH was used as an indicator to determine whether a release had occurred. A summary of the samples collected and analyses performed during this investigation is included in Table 1.

In addition, using Geoprobe® screenpoint groundwater sampling techniques, groundwater samples were collected from both of the borings. The groundwater samples were collected from a depth 5 to 7 feet. The groundwater samples were submitted to AEL for analysis of VOCs, metals, and TPH. A summary of the samples collected and analyses performed is included in Table 1.

Investigation Results: Based on the boring logs, groundwater was encountered at approximately 4 feet in both borings. Varved clay was encountered at 11 feet in boring NK-SB-12 and at 10 feet in boring NK-SB-13. No visual or olfactory evidence of contamination was noted on the boring logs.

Concentrations of constituents detected in soil samples collected for this unit are presented in Table 2. A complete summary of the sample analytical results with detection limits is presented

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in Table 3. The highest concentration of each constituent detected at each sampling location is shown on Drawing 1. No VOCs were detected in the soil samples submitted to the LEA Analytical Laboratory or to AEL. No TPH was detected in the soil samples submitted to AEL. One or more of the metals analyzed were detected in each of the four samples submitted for analysis. These metals include arsenic, barium, chromium, nickel, and zinc. Chromium was detected in NK-SB-12 at a depth of 2 to 4 feet at a concentration of 5.6 milligrams per kilogram (mg/kg) and in NK-SB-13 at concentration of 18.1 mg/kg. Other metals were detected at concentrations consistent with the appropriate background concentrations.

Concentrations of constituents detected in groundwater samples collected for this unit are presented in Table 4. A complete summary of groundwater sample analytical results with detection limits is presented in Table 5. Barium and zinc were detected in the groundwater samples collected from soil borings NK-SB-12, and NK-SB-13. Barium was detected in NK-SB-12 and NK-SB-13 at concentrations of 0.019 and 0.014 milligrams per liter (mg/l), respectively. Zinc was detected in NK-SB-12 and NK-SB-13 at concentrations of 0.018 and 0.042 milligrams per liter (mg/l), respectively.

Data Evaluation and Conclusions: The data were compared against the default numeric criteria included in the RSR and the site-wide background soil concentrations for the North Klondike for various metals. Criteria are established in the RSR based on exposure pathways for various environmental media, including soil and groundwater. The evaluation of the soils data is based on a comparison to the residential direct exposure criteria (RDEC), industrial/commercial direct exposure criteria (IDEC) and the GB pollutant mobility criteria (GBPMC) included in the RSR and the site-specific background soil concentrations. The evaluation of groundwater data is based on a comparison to the residential volatilization criteria (RVC), the industrial/commercial volatilization criteria (IVC), and the surface water protection criteria (SWPC) included in the RSR.

The concentrations of the metals detected in the soil samples are typical of background concentrations, except for chromium detected at a concentration of 18.1 mg/kg in boring NK-SB-13 at a depth of 2 to 4 feet. The metals detected at this unit, except for chromium detected in boring NK-SB-13 at a depth of 2 to 4 feet, and are not indicative of a release from this unit.

For the metals detected in soil, no exceedances of the RDEC and IDEC were noted. For the metals detected in groundwater, no exceedances of the SWPC were noted.

Based on the laboratory results for chromium, this area was not adequately characterized. Limited additional characterization was necessary to address a possible release of chromium.

October 1996 Investigation (LEA):

Description: On October 17, 1996, three soil borings, NK-SB-211 through NK-SB-213, were advanced in the vicinity of the Explosives Storage Building by LEA, as shown on Drawing 1. The borings were advanced to a depth of 12 feet. The depth of 12 feet was selected to ensure that the varved clay was encountered. Soil samples were collected from each of the borings in continuous 2-foot intervals.

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A total of 19 soil samples were submitted to the LEA Analytical Laboratory and screened for the presence of target VOCs. Based on an elevated reading obtained with a photoionization detector (PID), one sample from NK-SB-213 was submitted to AEL and analyzed for the presence of VOCs. Based on an elevated chromium concentration in NK-SB-13 at a depth of 2 to 4 feet, one sample from the nearest boring (NK-SB-211) was submitted to AEL and analyzed for chromium. A summary of the samples collected and analyses performed during this investigation is included in Table 1.

Investigation Results: Based on the boring logs, groundwater was encountered at approximately 6 feet in all three borings. Varved clay was encountered at 8.5 feet in boring NK-SB-213 and at 10.5 feet in borings NK-SB-211 and NK-SB-212. A single elevated field headspace reading was observed in soil boring NK-SB-213.

Concentrations of constituents detected in soil samples collected for this unit are presented in Table 2. A complete summary of the sample analytical results with detection limits is presented in Table 3. No VOCs were detected in the soil samples submitted to the LEA Analytical Laboratory or to AEL. Chromium was not detected in the soil sample submitted for analysis from boring NK-SB-211.

Data Evaluation and Conclusions: Based on field observations and the laboratory results, this area has been adequately characterized. Based on the lack of detectable concentrations of chromium in boring NK-SB-211, the source for the, chromium which was detected above background in boring NK-SB-13, appears to be natural. There was no apparent evidence that a release has occurred.

PROPOSED ACTIONS:

Adequate characterization has been performed to address possible releases. No exceedances of default numeric criteria were detected, and no further evaluation or remedial activity is warranted.

REFERENCES:

Keystone Aerial Surveys, Inc. 1965, *Aerial Photo of Rentschler Airport and Surrounding Areas*, East Hartford, CT.

Keystone Aerial Surveys, Inc. 1970, *Aerial Photo of Rentschler Airport and Surrounding Areas*, East Hartford, CT.

Keystone Aerial Surveys, Inc. 1975, *Aerial Photo of Rentschler Airport and Surrounding Areas*, East Hartford, CT.

Loureiro Engineering Associates, August 18, 1995, *Rentschler Airport and Klondike Areas Data Gap Investigation and Work Plan*, Pratt & Whitney, 400 Main Street, East Hartford, CT.

Loureiro Engineering Associates, October 1995, *Rentschler Airport and Klondike Areas Data Gap Investigation and Work Plan*, United Technologies Corporation, Pratt & Whitney, 400 Main

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Street, East Hartford, CT.

P&W Photographic Services Department, 1969, *Aerial Photograph, Negative Number Z-36268*,
Pratt & Whitney, East Hartford, CT.

P&W Photographic Services Department, 1975, *Aerial Photograph, Negative Number CN-50747*,
Pratt & Whitney, East Hartford, CT.

P&W Photographic Services Department, 1977, *Aerial Photograph, Negative Number 77445-0054AB* Pratt & Whitney, East Hartford, CT.

TABLES

Table 1
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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Sample Information						Analysis Information								
Location ID	Sample ID	Sample Date	From (ft)	To (ft)	Class	Portable GC	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides	PCBs	Metals	Extraction	Miscellaneous
NK-SB-12	1015488	6/28/96	0	2	SB	x								
NK-SB-12	1015489	6/28/96	2	4	SB	x	x					x	x	x
NK-SB-12	1015490	6/28/96	4	6	SB	x								
NK-SB-12	1015491	6/28/96	6	8	SB	x	x					x		x
NK-SB-12	1015492	6/28/96	8	10	SB	x								
NK-SB-12	1015493	6/28/96	10	12	SB	x								
NK-SB-12	1015494	6/28/96	12	14	SB	x								
NK-SB-12	1015495	6/28/96	14	15	SB	x								
NK-SB-12	1015676	7/ 3/96	5	7	GW		x					x		x
NK-SB-13	1015496	6/28/96	0	2	SB	x								
NK-SB-13	1015497	6/28/96	2	4	SB	x	x					x	x	x
NK-SB-13	1015498	6/28/96	4	6	SB	x								
NK-SB-13	1015499	6/28/96	6	8	SB	x								
NK-SB-13	1015500	6/28/96	8	10	SB	x								
NK-SB-13	1015501	6/28/96	10	12	SB	x	x					x		x
NK-SB-13	1015502	6/28/96	12	14	SB	x								
NK-SB-13	1015675	7/ 3/96	5	7	GW		x					x		x
NK-SB-211	1019322	10/17/96	0	2	SB	x								
NK-SB-211	1019323	10/17/96	2	4	SB	x							x	
NK-SB-211	1019324	10/17/96	4	6	SB	x								
NK-SB-211	1019325	10/17/96	6	8	SB	x								
NK-SB-211	1019326	10/17/96	6	8	SB	x								
NK-SB-211	1019327	10/17/96	8	10	SB	x								
NK-SB-211	1019328	10/17/96	10	12	SB	x								
NK-SB-212	1019329	10/17/96	0	2	SB	x								
NK-SB-212	1019330	10/17/96	2	4	SB	x								
NK-SB-212	1019331	10/17/96	4	6	SB	x								
NK-SB-212	1019332	10/17/96	6	8	SB	x								
NK-SB-212	1019333	10/17/96	8	10	SB	x								
NK-SB-212	1019334	10/17/96	10	12	SB	x								
NK-SB-213	1019335	10/17/96	0	2	SB	x								

Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit

2. Printed on 07/22/99

LEA

Table 1
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit
2. Printed on 07/22/99



Table 2 *DRAFT*
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS) - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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Notes: 1. Only Detects Shown
2. Printed on 07/22/99



Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12
Sample ID	1015488	1015489	1015489	1015489	1015490	1015491	1015491	1015491
Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
Sample Time	12:05	12:15	12:15	12:15	12:20	12:30	12:30	12:30
Sample Depth	0' - 2'	2' - 4'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	6' - 8'
Laboratory	LEA	AEL	AEL	LEA	LEA	AEL	LEA	LEA
Lab. Number	96-3164-129	AEL96007302	AEL96010878	96-3165-004	96-3166-005	AEL96007305	96-3163-128	
Constituent	Units							
Date Metals Analyzed	-		07/10/1996				07/10/1996	
Date Organics Analyzed	-	07/01/1996	07/08/1996		07/02/1996	07/02/1996	07/08/1996	07/01/1996
Date Physical Analyzed	-		07/18/1996				07/18/1996	
Date of Metals SPLP Analysis	-			10/17/1996				
Arsenic	mg/kg		<1.12				<1.23	
Arsenic (SPLP)	mg/L			<0.010				
Barium	mg/kg		14.4				22	
Barium (SPLP)	mg/L			<1.00				
Cadmium	mg/kg		<3.35				<3.69	
Cadmium (SPLP)	mg/L			<0.0010				
Chromium	mg/kg		5.6				<6.15	
Chromium (SPLP)	mg/L			<0.050				
Lead	mg/kg		<22.3				<24.6	
Lead (SPLP)	mg/L			<0.0050				
Mercury	mg/kg		<0.223				<0.246	
Mercury (SPLP)	mg/L			<0.0020				
Nickel	mg/kg		<11.2				<12.3	
Nickel (SPLP)	mg/L			<0.10				
Selenium	mg/kg		<1.12				<1.23	
Selenium (SPLP)	mg/L			<0.010				
Silver	mg/kg		<5.58				<6.4	
Silver (SPLP)	mg/L			<0.020				
Zinc	mg/kg		20.2				14.8	
Zinc (SPLP)	mg/L			<0.050				
Total Petroleum Hydrocarbons	mg/kg		<38.5				<41.5	
Acetone	µg/kg		<37				<25	
Acrolein	µg/kg		<19				<12	
Acrylonitrile	µg/kg		<19				<12	

Notes: 1. Printed on 07/22/99



Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-12						
	Sample ID	1015488	1015489	1015489	1015489	1015490	1015491	1015491
	Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
	Sample Time	12:05	12:15	12:15	12:15	12:20	12:30	12:30
	Sample Depth	0' - 2'	2' - 4'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	6' - 8'
	Laboratory	LEA	AEL	AEL	LEA	LEA	AEL	LEA
	Lab. Number	96-3164-129	AEL96007302	AEL96010878	96-3165-004	96-3166-005	AEL96007305	96-3163-128
Constituent	Units							
Benzene	µg/kg		<7.4				<4.9	
Benzene (screening)	µg/kg	<15			<13	<15		<15
Bromobenzene	µg/kg		<7.4				<4.9	
Bromoform	µg/kg		<7.4				<4.9	
Carbon Disulfide	µg/kg		<7.4				<4.9	
Carbon Tetrachloride	µg/kg		<7.4				<4.9	
Chlorobenzene	µg/kg		<7.4				<4.9	
Chlorodibromomethane	µg/kg		<7.4				<4.9	
Chloroethane	µg/kg		<7.4				<4.9	
Chloroethyl Vinyl Ether,2-	µg/kg		<7.4				<4.9	
Chloroform	µg/kg		<7.4				<4.9	
Chlorotoluene,o-	µg/kg		<7.4				<4.9	
Chlorotoluene,p-	µg/kg		<7.4				<4.9	
Dibromomethane	µg/kg		<7.4				<4.9	
Dichlorobenzene,1,2-	µg/kg		<7.4				<4.9	
Dichlorobenzene,1,3-	µg/kg		<7.4				<4.9	
Dichlorobenzene,1,4-	µg/kg		<7.4				<4.9	
Dichlorobromomethane	µg/kg		<7.4				<4.9	
Dichlorodifluoromethane	µg/kg		<7.4				<4.9	
Dichloroethane,1,1-	µg/kg		<7.4				<4.9	
Dichloroethane,1,2-	µg/kg		<7.4				<4.9	
Dichloroethylene,1,1-	µg/kg		<7.4				<4.9	
Dichloroethylene,1,2-cis-	µg/kg		<7.4				<4.9	
Dichloroethylene,1,2-trans-	µg/kg		<7.4				<4.9	
Dichloropropane,1,2-	µg/kg		<7.4				<4.9	
Dichloropropylene,1,3-cis-	µg/kg		<7.4				<4.9	
Dichloropropylene,1,3-trans-	µg/kg		<7.4				<4.9	
Ethylbenzene	µg/kg		<7.4				<4.9	

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12
Sample ID	1015488	1015489	1015489	1015489	1015490	1015491	1015491	1015491
Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
Sample Time	12:05	12:15	12:15	12:15	12:20	12:30	12:30	12:30
Sample Depth	0' - 2'	2' - 4'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	6' - 8'
Laboratory	LEA	AEL	AEL	LEA	LEA	AEL	AEL	LEA
Lab. Number	96-3164-129	AEL96007302	AEL96010878	96-3165-004	96-3166-005	AEL96007305	96-3163-128	
Constituent	Units							
Ethylbenzene (screening)	µg/kg	<22						<22
Hexanone,2-	µg/kg		<19					<12
Methyl Bromide	µg/kg		<7.4					<4.9
Methyl Chloride	µg/kg		<7.4					<4.9
Methyl Ethyl Ketone	µg/kg		<19					<12
Methyl-2-pentanone,4-	µg/kg		<19					<12
Methyl-tert-butyl Ether	µg/kg		<7.4					<4.9
Methylene Chloride	µg/kg		<7.4					<4.9
Styrene	µg/kg		<7.4					<4.9
Tetrachloroethane,1,1,1,2-	µg/kg		<7.4					<4.9
Tetrachloroethane,1,1,2,2-	µg/kg		<7.4					<4.9
Tetrachloroethylene	µg/kg		<7.4					<4.9
Tetrachloroethylene (screening)	µg/kg	<23			<20	<23		<23
Toluene	µg/kg		<7.4					<4.9
Toluene (screening)	µg/kg	<22			<19	<21		<22
Trichloroethane,1,1,1-	µg/kg		<7.4					<4.9
Trichloroethane,1,1,1- (screening)	µg/kg	<375			<325	<361		<375
Trichloroethane,1,1,2-	µg/kg		<7.4					<4.9
Trichloroethylene	µg/kg		<7.4					<4.9
Trichloroethylene (screening)	µg/kg	<36			<32	<35		<36
Trichloromonofluoromethane	µg/kg		<7.4					<4.9
Trichloropropane,1,2,3-	µg/kg		<7.4					<4.9
Vinyl Acetate	µg/kg		<7.4					<4.9
Vinyl Chloride	µg/kg		<7.4					<4.9
Xylenes (Total)	µg/kg		<7.4					<4.9
Xylenes (Total) (screening)	µg/kg	<47						<47

Notes: 1. Printed on 07/22/99



Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-13	NK-SB-13	NK-SB-13
	Sample ID	1015492	1015493	1015494	1015495	1015496	1015497	1015497
	Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
	Sample Time	12:32	12:35	12:51	12:59	13:20	13:30	13:30
	Sample Depth	8' - 10'	10' - 12'	12' - 14'	14' - 15'	0' - 2'	2' - 4'	2' - 4'
	Laboratory	LEA	LEA	LEA	LEA	LEA	AEL	AEL
	Lab. Number	96-3169-008	96-3170-009	96-3171-010	96-3173-012	96-3174-013	AEL96007303	AEL96010879
Constituent	Units							
Date Metals Analyzed	-						07/10/1996	
Date Organics Analyzed	-	07/02/1996	07/02/1996	07/02/1996	07/02/1996	07/02/1996	07/08/1996	
Date Physical Analyzed	-						07/18/1996	
Date of Metals SPLP Analysis	-							10/04/1996
Arsenic	mg/kg						1.21	
Arsenic (SPLP)	mg/L						<0.010	
Barium	mg/kg						8.03	
Barium (SPLP)	mg/L						<1.00	
Cadmium	mg/kg						<3.38	
Cadmium (SPLP)	mg/L						<0.0010	
Chromium	mg/kg						18.1	
Chromium (SPLP)	mg/L						<0.050	
Lead	mg/kg						<22.6	
Lead (SPLP)	mg/L						<0.0050	
Mercury	mg/kg						<0.226	
Mercury (SPLP)	mg/L						<0.0020	
Nickel	mg/kg						17.2	
Nickel (SPLP)	mg/L						<0.10	
Selenium	mg/kg						<1.13	
Selenium (SPLP)	mg/L						<0.010	
Silver	mg/kg						<5.64	
Silver (SPLP)	mg/L						<0.020	
Zinc	mg/kg						27.4	
Zinc (SPLP)	mg/L						<0.050	
Total Petroleum Hydrocarbons	mg/kg						<38.1	
Acetone	µg/kg						<31	
Acrolein	µg/kg						<15	
Acrylonitrile	µg/kg						<15	

Notes: 1. Printed on 07/22/99



Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-13	NK-SB-13	NK-SB-13
Sample ID	1015492	1015493	1015494	1015495	1015496	1015497	1015497	1015497
Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
Sample Time	12:32	12:35	12:51	12:59	13:20	13:30	13:30	13:30
Sample Depth	8' - 10'	10' - 12'	12' - 14'	14' - 15'	0' - 2'	2' - 4'	2' - 4'	2' - 4'
Laboratory	LEA	LEA	LEA	LEA	LEA	AEL	AEL	AEL
Lab. Number	96-3169-008	96-3170-009	96-3171-010	96-3173-012	96-3174-013	AEL96007303	AEL96010879	
Constituent	Units							
Benzene	µg/kg					<6.2		
Benzene (screening)	µg/kg	<14	<13	<16	<13	<14		
Bromobenzene	µg/kg					<6.2		
Bromoform	µg/kg					<6.2		
Carbon Disulfide	µg/kg					<6.2		
Carbon Tetrachloride	µg/kg					<6.2		
Chlorobenzene	µg/kg					<6.2		
Chlorodibromomethane	µg/kg					<6.2		
Chloroethane	µg/kg					<6.2		
Chloroethyl Vinyl Ether,2-	µg/kg					<6.2		
Chloroform	µg/kg					<6.2		
Chlorotoluene,o-	µg/kg					<6.2		
Chlorotoluene,p-	µg/kg					<6.2		
Dibromomethane	µg/kg					<6.2		
Dichlorobenzene,1,2-	µg/kg					<6.2		
Dichlorobenzene,1,3-	µg/kg					<6.2		
Dichlorobenzene,1,4-	µg/kg					<6.2		
Dichlorobromomethane	µg/kg					<6.2		
Dichlorodifluoromethane	µg/kg					<6.2		
Dichloroethane,1,1-	µg/kg					<6.2		
Dichloroethane,1,2-	µg/kg					<6.2		
Dichloroethylene,1,1-	µg/kg					<6.2		
Dichloroethylene,1,2-cis-	µg/kg					<6.2		
Dichloroethylene,1,2-trans-	µg/kg					<6.2		
Dichloropropane,1,2-	µg/kg					<6.2		
Dichloropropylene,1,3-cis-	µg/kg					<6.2		
Dichloropropylene,1,3-trans-	µg/kg					<6.2		
Ethylbenzene	µg/kg					<6.2		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-12	NK-SB-13	NK-SB-13	NK-SB-13
Sample ID	1015492	1015493	1015494	1015495	1015496	1015497	1015497	1015497
Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
Sample Time	12:32	12:35	12:51	12:59	13:20	13:30	13:30	13:30
Sample Depth	8' - 10'	10' - 12'	12' - 14'	14' - 15'	0' - 2'	2' - 4'	2' - 4'	2' - 4'
Laboratory	LEA	LEA	LEA	LEA	LEA	AEL	AEL	AEL
Lab. Number	96-3169-008	96-3170-009	96-3171-010	96-3173-012	96-3174-013	AEL96007303	AEL96010879	
Constituent	Units							
Ethylbenzene (screening)	µg/kg							
Hexanone,2-	µg/kg					<15		
Methyl Bromide	µg/kg					<6.2		
Methyl Chloride	µg/kg					<6.2		
Methyl Ethyl Ketone	µg/kg					<15		
Methyl-2-pentanone,4-	µg/kg					<15		
Methyl-tert-butyl Ether	µg/kg					<6.2		
Methylene Chloride	µg/kg					<6.2		
Styrene	µg/kg					<6.2		
Tetrachloroethane,1,1,1,2-	µg/kg					<6.2		
Tetrachloroethane,1,1,2,2-	µg/kg					<6.2		
Tetrachloroethylene	µg/kg					<6.2		
Tetrachloroethylene (screening)	µg/kg	<21	<20	<24	<19	<21		
Toluene	µg/kg					<6.2		
Toluene (screening)	µg/kg	<20	<19	<22	<18	<20		
Trichloroethane,1,1,1-	µg/kg					<6.2		
Trichloroethane,1,1,1- (screening)	µg/kg	<342	<325	<382	<310	<342		
Trichloroethane,1,1,2-	µg/kg					<6.2		
Trichloroethylene	µg/kg					<6.2		
Trichloroethylene (screening)	µg/kg	<33	<32	<37	<30	<33		
Trichloromonofluoromethane	µg/kg					<6.2		
Trichloropropane,1,2,3-	µg/kg					<6.2		
Vinyl Acetate	µg/kg					<6.2		
Vinyl Chloride	µg/kg					<6.2		
Xylenes (Total)	µg/kg					<6.2		
Xylenes (Total) (screening)	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13
Sample ID	1015497	1015498	1015499	1015500	1015501	1015501	1015502	1015502
Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
Sample Time	13:30	13:50	14:00	14:02	14:07	14:07	14:07	14:40
Sample Depth	2' - 4'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	10' - 12'	12' - 14'	12' - 14'
Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA	LEA
Lab. Number	96-3175-014	96-3176-015	96-3177-016	96-3178-017	AEL96007306	96-3179-018	96-3180-019	
Constituent	Units							
Date Metals Analyzed	-					07/10/1996		
Date Organics Analyzed	-	07/02/1996	07/02/1996	07/02/1996	07/02/1996	07/08/1996	07/02/1996	07/02/1996
Date Physical Analyzed	-					07/18/1996		
Date of Metals SPLP Analysis	-							
Arsenic	mg/kg					6.9		
Arsenic (SPLP)	mg/L							
Barium	mg/kg					254		
Barium (SPLP)	mg/L							
Cadmium	mg/kg					<4.82		
Cadmium (SPLP)	mg/L							
Chromium	mg/kg					48.2		
Chromium (SPLP)	mg/L							
Lead	mg/kg					<32.1		
Lead (SPLP)	mg/L							
Mercury	mg/kg					<0.321		
Mercury (SPLP)	mg/L							
Nickel	mg/kg					43.4		
Nickel (SPLP)	mg/L							
Selenium	mg/kg					<1.61		
Selenium (SPLP)	mg/L							
Silver	mg/kg					<8.04		
Silver (SPLP)	mg/L							
Zinc	mg/kg					106		
Zinc (SPLP)	mg/L							
Total Petroleum Hydrocarbons	mg/kg					<79.9		
Acetone	µg/kg					<120		
Acrolein	µg/kg					<61		
Acrylonitrile	µg/kg					<61		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-13						
	Sample ID	1015497	1015498	1015499	1015500	1015501	1015501	1015502
	Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
	Sample Time	13:30	13:50	14:00	14:02	14:07	14:07	14:40
	Sample Depth	2' - 4'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	10' - 12'	12' - 14'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	96-3175-014	96-3176-015	96-3177-016	96-3178-017	AEL96007306	96-3179-018	96-3180-019
Constituent	Units							
Benzene	µg/kg					<24		
Benzene (screening)	µg/kg	<14	<16	<15	<15		<14	<14
Bromobenzene	µg/kg					<24		
Bromoform	µg/kg					<24		
Carbon Disulfide	µg/kg					<24		
Carbon Tetrachloride	µg/kg					<24		
Chlorobenzene	µg/kg					<24		
Chlorodibromomethane	µg/kg					<24		
Chloroethane	µg/kg					<24		
Chloroethyl Vinyl Ether,2-	µg/kg					<24		
Chloroform	µg/kg					<24		
Chlorotoluene,o-	µg/kg					<24		
Chlorotoluene,p-	µg/kg					<24		
Dibromomethane	µg/kg					<24		
Dichlorobenzene,1,2-	µg/kg					<24		
Dichlorobenzene,1,3-	µg/kg					<24		
Dichlorobenzene,1,4-	µg/kg					<24		
Dichlorobromomethane	µg/kg					<24		
Dichlorodifluoromethane	µg/kg					<24		
Dichloroethane,1,1-	µg/kg					<24		
Dichloroethane,1,2-	µg/kg					<24		
Dichloroethylene,1,1-	µg/kg					<24		
Dichloroethylene,1,2-cis-	µg/kg					<24		
Dichloroethylene,1,2-trans-	µg/kg					<24		
Dichloropropane,1,2-	µg/kg					<24		
Dichloropropylene,1,3-cis-	µg/kg					<24		
Dichloropropylene,1,3-trans-	µg/kg					<24		
Ethylbenzene	µg/kg					<24		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13	NK-SB-13
Sample ID	1015497	1015498	1015499	1015500	1015501	1015501	1015501	1015502
Sample Date	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996	06/28/1996
Sample Time	13:30	13:50	14:00	14:02	14:07	14:07	14:07	14:40
Sample Depth	2' - 4'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	10' - 12'	10' - 12'	12' - 14'
Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA	LEA
Lab. Number	96-3175-014	96-3176-015	96-3177-016	96-3178-017	AEL96007306	96-3179-018	96-3180-019	
Constituent	Units							
Ethylbenzene (screening)	µg/kg							
Hexanone,2-	µg/kg					<61		
Methyl Bromide	µg/kg					<24		
Methyl Chloride	µg/kg					<24		
Methyl Ethyl Ketone	µg/kg					<61		
Methyl-2-pentanone,4-	µg/kg					<61		
Methyl-tert-butyl Ether	µg/kg					<24		
Methylene Chloride	µg/kg					<24		
Styrene	µg/kg					<24		
Tetrachloroethane,1,1,1,2-	µg/kg					<24		
Tetrachloroethane,1,1,2,2-	µg/kg					<24		
Tetrachloroethylene	µg/kg					<24		
Tetrachloroethylene (screening)	µg/kg	<21	<24	<23	<23		<21	<21
Toluene	µg/kg					<24		
Toluene (screening)	µg/kg	<19	<22	<21	<21		<19	<19
Trichloroethane,1,1,1-	µg/kg					<24		
Trichloroethane,1,1,1- (screening)	µg/kg	<336	<382	<368	<361		<331	<331
Trichloroethane,1,1,2-	µg/kg					<24		
Trichloroethylene	µg/kg					<24		
Trichloroethylene (screening)	µg/kg	<33	<37	<36	<35		<32	<32
Trichloromonofluoromethane	µg/kg					<24		
Trichloroproppane,1,2,3-	µg/kg					<24		
Vinyl Acetate	µg/kg					<24		
Vinyl Chloride	µg/kg					<24		
Xylenes (Total)	µg/kg					<24		
Xylenes (Total) (screening)	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211
Sample ID	1019322	1019323	1019323	1019324	1019325	1019326	1019327	1019327
Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
Sample Time	10:30	10:40	10:40	10:50	11:00	11:10	11:20	
Sample Depth	0' - 2'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'	
Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA	LEA
Lab. Number	96-5238-077	AEL97001947	96-5239-078	96-5240-079	96-5241-080	96-5242-081	96-5245-085	
Constituent	Units							
Date Metals Analyzed	-		02/18/1997					
Date Organics Analyzed	-	10/18/1996		10/18/1996	10/18/1996	10/18/1996	10/18/1996	10/21/1996
Date Physical Analyzed	-							
Date of Metals SPLP Analysis	-							
Arsenic	mg/kg							
Arsenic (SPLP)	mg/L							
Barium	mg/kg							
Barium (SPLP)	mg/L							
Cadmium	mg/kg							
Cadmium (SPLP)	mg/L							
Chromium	mg/kg		<5.81					
Chromium (SPLP)	mg/L							
Lead	mg/kg							
Lead (SPLP)	mg/L							
Mercury	mg/kg							
Mercury (SPLP)	mg/L							
Nickel	mg/kg							
Nickel (SPLP)	mg/L							
Selenium	mg/kg							
Selenium (SPLP)	mg/L							
Silver	mg/kg							
Silver (SPLP)	mg/L							
Zinc	mg/kg							
Zinc (SPLP)	mg/L							
Total Petroleum Hydrocarbons	mg/kg							
Acetone	µg/kg							
Acrolein	µg/kg							
Acrylonitrile	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-211						
	Sample ID	1019322	1019323	1019323	1019324	1019325	1019326	1019327
	Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
	Sample Time	10:30	10:40	10:40	10:50	11:00	11:10	11:20
	Sample Depth	0' - 2'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'
	Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA
	Lab. Number	96-5238-077	AEL97001947	96-5239-078	96-5240-079	96-5241-080	96-5242-081	96-5245-085
Constituent	Units							
Benzene	µg/kg							
Benzene (screening)	µg/kg	<6		<7	<7	<7	<7	<8 nc
Bromobenzene	µg/kg							
Bromoform	µg/kg							
Carbon Disulfide	µg/kg							
Carbon Tetrachloride	µg/kg							
Chlorobenzene	µg/kg							
Chlorodibromomethane	µg/kg							
Chloroethane	µg/kg							
Chloroethyl Vinyl Ether,2-	µg/kg							
Chloroform	µg/kg							
Chlorotoluene,o-	µg/kg							
Chlorotoluene,p-	µg/kg							
Dibromomethane	µg/kg							
Dichlorobenzene,1,2-	µg/kg							
Dichlorobenzene,1,3-	µg/kg							
Dichlorobenzene,1,4-	µg/kg							
Dichlorobromomethane	µg/kg							
Dichlorodifluoromethane	µg/kg							
Dichloroethane,1,1-	µg/kg							
Dichloroethane,1,2-	µg/kg							
Dichloroethylene,1,1-	µg/kg							
Dichloroethylene,1,2-cis-	µg/kg							
Dichloroethylene,1,2-trans-	µg/kg							
Dichloropropane,1,2-	µg/kg							
Dichloropropylene,1,3-cis-	µg/kg							
Dichloropropylene,1,3-trans-	µg/kg							
Ethylbenzene	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211	NK-SB-211
Sample ID	1019322	1019323	1019323	1019324	1019325	1019326	1019327		
Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996		
Sample Time	10:30	10:40	10:40	10:50	11:00	11:10	11:20		
Sample Depth	0' - 2'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'		
Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA		
Lab. Number	96-5238-077	AEL97001947	96-5239-078	96-5240-079	96-5241-080	96-5242-081	96-5245-085		
Constituent	Units								
Ethylbenzene (screening)	µg/kg	<13		<16	<16	<15	<14	<18 nc	
Hexanone,2-	µg/kg								
Methyl Bromide	µg/kg								
Methyl Chloride	µg/kg								
Methyl Ethyl Ketone	µg/kg								
Methyl-2-pentanone,4-	µg/kg								
Methyl-tert-butyl Ether	µg/kg								
Methylene Chloride	µg/kg								
Styrene	µg/kg								
Tetrachloroethane,1,1,1,2-	µg/kg								
Tetrachloroethane,1,1,2,2-	µg/kg								
Tetrachloroethylene	µg/kg								
Tetrachloroethylene (screening)	µg/kg	<16		<20	<20	<19	<18	<22 nc	
Toluene	µg/kg								
Toluene (screening)	µg/kg	<9		<11	<11	<10	<10	<13 nc	
Trichloroethane,1,1,1-	µg/kg								
Trichloroethane,1,1,1- (screening)	µg/kg	<163		<195	<199	<185	<179	<224 nc	
Trichloroethane,1,1,2-	µg/kg								
Trichloroethylene	µg/kg								
Trichloroethylene (screening)	µg/kg	<16		<19	<20	<18	<18	<22 nc	
Trichloromonofluoromethane	µg/kg								
Trichloropropane,1,2,3-	µg/kg								
Vinyl Acetate	µg/kg								
Vinyl Chloride	µg/kg								
Xylenes (Total)	µg/kg								
Xylenes (Total) (screening)	µg/kg								

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-211	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212
Sample ID	1019328	1019329	1019330	1019331	1019332	1019333	1019334	
Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
Sample Time	11:30	12:45	12:55	13:05	13:15	13:25		13:35
Sample Depth	10' - 12'	0' - 2'	2' - 4'	4' - 6'	6' - 8'	8' - 10'		10' - 12'
Laboratory	LEA	LEA	LEA	LEA	LEA	LEA		LEA
Lab. Number	96-5246-086	96-5247-087	96-5248-088	96-5249-089	96-5250-090	96-5251-091		96-5252-092
Constituent	Units							
Date Metals Analyzed	-							
Date Organics Analyzed	-	10/21/1996	10/21/1996	10/21/1996	10/21/1996	10/21/1996		10/21/1996
Date Physical Analyzed	-							
Date of Metals SPLP Analysis	-							
Arsenic	mg/kg							
Arsenic (SPLP)	mg/L							
Barium	mg/kg							
Barium (SPLP)	mg/L							
Cadmium	mg/kg							
Cadmium (SPLP)	mg/L							
Chromium	mg/kg							
Chromium (SPLP)	mg/L							
Lead	mg/kg							
Lead (SPLP)	mg/L							
Mercury	mg/kg							
Mercury (SPLP)	mg/L							
Nickel	mg/kg							
Nickel (SPLP)	mg/L							
Selenium	mg/kg							
Selenium (SPLP)	mg/L							
Silver	mg/kg							
Silver (SPLP)	mg/L							
Zinc	mg/kg							
Zinc (SPLP)	mg/L							
Total Petroleum Hydrocarbons	mg/kg							
Acetone	µg/kg							
Acrolein	µg/kg							
Acrylonitrile	µg/kg							

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SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-211	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212
Sample ID	1019328	1019329	1019330	1019331	1019332	1019333	1019334	1019334
Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
Sample Time	11:30	12:45	12:55	13:05	13:15	13:25	13:35	
Sample Depth	10' - 12'	0' - 2'	2' - 4'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	
Laboratory	LEA	LEA						
Lab. Number	96-5246-086	96-5247-087	96-5248-088	96-5249-089	96-5250-090	96-5251-091	96-5252-092	
Constituent	Units							
Benzene	µg/kg							
Benzene (screening)	µg/kg	<7	<8 nc	<7	<8	<7	<6 nc	<8
Bromobenzene	µg/kg							
Bromoform	µg/kg							
Carbon Disulfide	µg/kg							
Carbon Tetrachloride	µg/kg							
Chlorobenzene	µg/kg							
Chlorodibromomethane	µg/kg							
Chloroethane	µg/kg							
Chloroethyl Vinyl Ether,2-	µg/kg							
Chloroform	µg/kg							
Chlorotoluene,o-	µg/kg							
Chlorotoluene,p-	µg/kg							
Dibromomethane	µg/kg							
Dichlorobenzene,1,2-	µg/kg							
Dichlorobenzene,1,3-	µg/kg							
Dichlorobenzene,1,4-	µg/kg							
Dichlorobromomethane	µg/kg							
Dichlorodifluoromethane	µg/kg							
Dichloroethane,1,1-	µg/kg							
Dichloroethane,1,2-	µg/kg							
Dichloroethylene,1,1-	µg/kg							
Dichloroethylene,1,2-cis-	µg/kg							
Dichloroethylene,1,2-trans-	µg/kg							
Dichloropropane,1,2-	µg/kg							
Dichloropropylene,1,3-cis-	µg/kg							
Dichloropropylene,1,3-trans-	µg/kg							
Ethylbenzene	µg/kg							

Notes: 1. Printed on 07/22/99

Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-211	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212	NK-SB-212
Sample ID	1019328	1019329	1019330	1019331	1019332	1019333	1019334	1019334
Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
Sample Time	11:30	12:45	12:55	13:05	13:15	13:25		13:35
Sample Depth	10' - 12'	0' - 2'	2' - 4'	4' - 6'	6' - 8'	8' - 10'		10' - 12'
Laboratory	LEA	LEA						
Lab. Number	96-5246-086	96-5247-087	96-5248-088	96-5249-089	96-5250-090	96-5251-091	96-5252-092	
Constituent	Units							
Ethylbenzene (screening)	µg/kg	<15	<17 nc	<15	<16	<16	<12 nc	<17
Hexanone,2-	µg/kg							
Methyl Bromide	µg/kg							
Methyl Chloride	µg/kg							
Methyl Ethyl Ketone	µg/kg							
Methyl-2-pentanone,4-	µg/kg							
Methyl-tert-butyl Ether	µg/kg							
Methylene Chloride	µg/kg							
Styrene	µg/kg							
Tetrachloroethane,1,1,1,2-	µg/kg							
Tetrachloroethane,1,1,2,2-	µg/kg							
Tetrachloroethylene	µg/kg							
Tetrachloroethylene (screening)	µg/kg	<19	<22 nc	<19	<20	<20	<15 nc	<22
Toluene	µg/kg							
Toluene (screening)	µg/kg	<11	<12 nc	<10	<11	<11	<8 nc	<12
Trichloroethane,1,1,1-	µg/kg							
Trichloroethane,1,1,1- (screening)	µg/kg	<188	<219 nc	<185	<203	<199	<151 nc	<215
Trichloroethane,1,1,2-	µg/kg							
Trichloroethylene	µg/kg							
Trichloroethylene (screening)	µg/kg	<19	<22 nc	<18	<20	<20	<15 nc	<21
Trichloromonofluoromethane	µg/kg							
Trichloropropane,1,2,3-	µg/kg							
Vinyl Acetate	µg/kg							
Vinyl Chloride	µg/kg							
Xylenes (Total)	µg/kg							
Xylenes (Total) (screening)	µg/kg							

Notes: 1. Printed on 07/22/99



Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-213	NK-SB-213	NK-SB-213	NK-SB-213	NK-SB-213	NK-SB-213	NK-SB-213
Sample ID	1019335	1019336	1019337	1019338	1019338	1019339	1019340	
Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
Sample Time	14:20	14:30	14:40	14:50	14:50	15:00	15:10	
Sample Depth	0' - 2'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'	
Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	LEA	
Lab. Number	96-5253-093	96-5255-097	96-5256-098	AEL96012050	96-5257-099	96-5260-102	96-5261-103	
Constituent	Units							
Date Metals Analyzed	-							
Date Organics Analyzed	-	10/21/1996	10/21/1996	10/21/1996	10/28/1996	10/21/1996	10/21/1996	10/21/1996
Date Physical Analyzed	-							
Date of Metals SPLP Analysis	-							
Arsenic	mg/kg							
Arsenic (SPLP)	mg/L							
Barium	mg/kg							
Barium (SPLP)	mg/L							
Cadmium	mg/kg							
Cadmium (SPLP)	mg/L							
Chromium	mg/kg							
Chromium (SPLP)	mg/L							
Lead	mg/kg							
Lead (SPLP)	mg/L							
Mercury	mg/kg							
Mercury (SPLP)	mg/L							
Nickel	mg/kg							
Nickel (SPLP)	mg/L							
Selenium	mg/kg							
Selenium (SPLP)	mg/L							
Silver	mg/kg							
Silver (SPLP)	mg/L							
Zinc	mg/kg							
Zinc (SPLP)	mg/L							
Total Petroleum Hydrocarbons	mg/kg							
Acetone	µg/kg				<29			
Acrolcin	µg/kg				<14			
Acrylonitrile	µg/kg				<14			

Notes: 1. Printed on 07/22/99



Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-213	NK-SB-213						
	Sample ID	1019335	1019336	1019337	1019338	1019338	1019339	1019340	1019340
	Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
	Sample Time	14:20	14:30	14:40	14:50	14:50	15:00	15:10	
	Sample Depth	0' - 2'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'	
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	LEA	LEA
	Lab. Number	96-5253-093	96-5255-097	96-5256-098	AEL96012050	96-5257-099	96-5260-102	96-5261-103	
Constituent	Units								
Benzene	µg/kg				<5.7				
Benzene (screening)	µg/kg	<8	<8	<8		<7	<7	<7	
Bromobenzene	µg/kg				<5.7				
Bromoform	µg/kg				<5.7				
Carbon Disulfide	µg/kg				<5.7				
Carbon Tetrachloride	µg/kg				<5.7				
Chlorobenzene	µg/kg				<5.7				
Chlorodibromomethane	µg/kg				<5.7				
Chloroethane	µg/kg				<5.7				
Chloroethyl Vinyl Ether,2-	µg/kg				<5.7				
Chloroform	µg/kg				<5.7				
Chlorotoluene,o-	µg/kg				<5.7				
Chlorotoluene,p-	µg/kg				<5.7				
Dibromomethane	µg/kg				<5.7				
Dichlorobenzene,1,2-	µg/kg				<5.7				
Dichlorobenzene,1,3-	µg/kg				<5.7				
Dichlorobenzene,1,4-	µg/kg				<5.7				
Dichlorobromomethane	µg/kg				<5.7				
Dichlorodifluoromethane	µg/kg				<5.7				
Dichloroethane,1,1-	µg/kg				<5.7				
Dichloroethane,1,2-	µg/kg				<5.7				
Dichloroethylene,1,1-	µg/kg				<5.7				
Dichloroethylene,1,2-cis-	µg/kg				<5.7				
Dichloroethylene,1,2-trans-	µg/kg				<5.7				
Dichloropropane,1,2-	µg/kg				<5.7				
Dichloropropylene,1,3-cis-	µg/kg				<5.7				
Dichloropropylene,1,3-trans-	µg/kg				<5.7				
Ethylbenzene	µg/kg				<5.7				

Notes: 1. Printed on 07/22/99



Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-213						
	Sample ID	1019335	1019336	1019337	1019338	1019338	1019339	1019340
	Sample Date	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996	10/17/1996
	Sample Time	14:20	14:30	14:40	14:50	14:50	15:00	15:10
	Sample Depth	0' - 2'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	LEA
	Lab. Number	96-5253-093	96-5255-097	96-5256-098	AEL96012050	96-5257-099	96-5260-102	96-5261-103
Constituent	Units							
Ethylbenzene (screening)	µg/kg	<17	<17	<17		<14	<15	<14
Hexanone,2-	µg/kg				<14			
Methyl Bromide	µg/kg				<5.7			
Methyl Chloride	µg/kg				<5.7			
Methyl Ethyl Ketone	µg/kg				<14			
Methyl-2-pentanone,4-	µg/kg				<14			
Methyl-tert-butyl Ether	µg/kg				<5.7			
Methylene Chloride	µg/kg				<13			
Styrene	µg/kg				<5.7			
Tetrachloroethane,1,1,1,2-	µg/kg				<5.7			
Tetrachloroethane,1,1,2,2-	µg/kg				<5.7			
Tetrachloroethylene	µg/kg				<5.7			
Tetrachloroethylene (screening)	µg/kg	<22	<21	<22		<18	<19	<18
Toluene	µg/kg				<5.7			
Toluene (screening)	µg/kg	<12	<12	<12		<10	<11	<10
Trichloroethane,1,1,1-	µg/kg				<5.7			
Trichloroethane,1,1,1- (screening)	µg/kg	<215	<211	<215		<179	<188	<176
Trichloroethane,1,1,2-	µg/kg				<5.7			
Trichloroethylene	µg/kg				<5.7			
Trichloroethylene (screening)	µg/kg	<21	<21	<21		<18	<19	<17
Trichloromonofluoromethane	µg/kg				<5.7			
Trichloropropane,1,2,3-	µg/kg				<5.7			
Vinyl Acetate	µg/kg				<5.7			
Vinyl Chloride	µg/kg				<5.7			
Xylenes (Total)	µg/kg				<5.7			
Xylenes (Total) (screening)	µg/kg						<30	<28

Notes: 1. Printed on 07/22/99

LEA

Table 4

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SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS) - GROUNDWATER
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

Page 1 of 1

Notes: 1. Only Detects Shown
2. Printed on 07/22/99



Table 5
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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	Location ID	NK-SB-12	NK-SB-13					
Sample ID	1015676	1015675						
Sample Date	07/03/1996	07/03/1996						
Sample Time	12:05	15:20						
Sample Depth	5' - 7'	5' - 7'						
Laboratory	AEL	AEL						
Lab. Number	AEL96007381	AEL96007380						
Constituent	Units							
Date Metals Analyzed	-	07/17/1996	07/17/1996					
Date Organics Analyzed	-	07/10/1996	07/10/1996					
Date Physical Analyzed	-	07/16/1996	07/16/1996					
Arsenic	mg/L	<0.010	<0.010					
Barium	mg/L	0.019	0.014					
Cadmium	mg/L	<0.0010	<0.0010					
Chromium	mg/L	<0.010	<0.010					
Lead	mg/L	<0.0050	<0.0050					
Mercury	mg/L	<0.0010	<0.0010					
Nickel	mg/L	<0.020	<0.020					
Selenium	mg/L	<0.010	<0.010					
Silver	mg/L	<0.010	<0.010					
Zinc	mg/L	0.018	0.042					
Total Petroleum Hydrocarbons	mg/L	<1.0	<1.0					
Acetone	µg/L	<25	<40					
Acrolein	µg/L	<10	<10					
Acrylonitrile	µg/L	<10	<10					
Benzene	µg/L	<4.0	<4.0					
Bromobenzene	µg/L	<4.0	<4.0					
Bromoform	µg/L	<4.0	<4.0					
Carbon Disulfide	µg/L	<4.0	<4.0					
Carbon Tetrachloride	µg/L	<4.0	<4.0					
Chlorobenzene	µg/L	<4.0	<4.0					
Chlorodibromomethane	µg/L	<4.0	<4.0					
Chloroethane	µg/L	<4.0	<4.0					
Chloroethyl Vinyl Ether,2-	µg/L	<4.0	<4.0					
Chloroform	µg/L	<4.0	<4.0					
Chlorotoluene,o-	µg/L	<4.0	<4.0					

Notes: 1. Printed on 07/22/99



Table 5
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER
P&W East Hartford: Explosives Storage Area - Explosives Storage Building

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Page 2 of 3

	Location ID	NK-SB-12	NK-SB-13					
	Sample ID	1015676	1015675					
	Sample Date	07/03/1996	07/03/1996					
	Sample Time	12:05	15:20					
	Sample Depth	5' - 7'	5' - 7'					
	Laboratory	AEL	AEL					
	Lab. Number	AEL96007381	AEL96007380					
Constituent	Units							
Chlorotoluene,p-	µg/L	<4.0	<4.0					
Dibromomethane	µg/L	<4.0	<4.0					
Dichlorobenzene,1,2-	µg/L	<4.0	<4.0					
Dichlorobenzene,1,3-	µg/L	<4.0	<4.0					
Dichlorobenzene,1,4-	µg/L	<4.0	<4.0					
Dichlorobromomethane	µg/L	<4.0	<4.0					
Dichlorodifluoromethane	µg/L	<4.0	<4.0					
Dichloroethane,1,1-	µg/L	<4.0	<4.0					
Dichloroethane,1,2-	µg/L	<4.0	<4.0					
Dichloroethylene,1,1-	µg/L	<4.0	<4.0					
Dichloroethylene,1,2-cis-	µg/L	<4.0	<4.0					
Dichloroethylene,1,2-trans-	µg/L	<4.0	<4.0					
Dichloropropane,1,2-	µg/L	<4.0	<4.0					
Dichloropropylene,1,3-cis-	µg/L	<4.0	<4.0					
Dichloropropylene,1,3-trans-	µg/L	<4.0	<4.0					
Ethylbenzene	µg/L	<4.0	<4.0					
Hexanone,2-	µg/L	<10	<10					
Methyl Bromide	µg/L	<4.0	<4.0					
Methyl Chloride	µg/L	<4.0	<4.0					
Methyl Ethyl Ketone	µg/L	<10	<10					
Methyl-2-pentanone,4-	µg/L	<10	<10					
Methyl-tert-butyl Ether	µg/L	<4.0	<4.0					
Methylene Chloride	µg/L	<4.0	<4.0					
Styrene	µg/L	<4.0	<4.0					
Tetrachloroethane,1,1,1,2-	µg/L	<4.0	<4.0					
Tetrachloroethane,1,1,2,2-	µg/L	<4.0	<4.0					
Tetrachloroethylene	µg/L	<4.0	<4.0					
Toluene	µg/L	<4.0	<4.0					

Notes: 1. Printed on 07/22/99

Table 5

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SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER

P&W East Hartford: Explosives Storage Area - Explosives Storage Building

Page 3 of 3

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CONSTITUENTS DETECTED MAP